

Work Order ID 139426

139426

Page 1

Friday, November 27, 2015 3:22:46 PM

Item ID: D6014-090 **Accept** ***N900040100*** **Setup Start** ***NS1***
Revision ID: **Stop** ***NS2***
Item Name: ALUMINUM EXTRUSION
Start Date: 11/27/2015 **Start Qty:** 28.00 ***28*** **Cust Item ID:**
Required Date: 4/29/2016 **Req'd Qty:** 28.00 ***28*** **Customer:**
Reference:

Approvals: **Process Plan:** MLS **Date:** 11-11-30 **Tooling:** **Date:**
QC: **Date:** **SPC (Y/N):** **Date:** **Run Start** ***NR1***
Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D6014	Rev A								

100

0.00

100

Purchasing

Purchasing

PURCHASING

Memo

0.00

Issue P/O: 301644

a) Extrude as per Dwg D6014

b) Material: 7075-T73/T73510/T73511 (QQ-A-200/11) Seamless Aluminum Tube

c) Minimum ultimate tensile strength = 68 ksi

d) Minimum tensile yield strength = 57 ksi

Possible Supplier: Aluminum Works

Material cert's is required

EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS.

MUST BE WELL PACKAGE, IF NOT IT WILL BE REFUSE

CL DEC 03 2015 28

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QS1042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabelled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
☐ OTHER : _____					

Work Order ID 139426

Friday, November 27, 2015 3:22:46 PM

139426

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Item ID: D6014-090 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: ALUMINUM EXTRUSION
 Start Date: 11/27/2015 Start Qty: 28.00 ***28*** Cust Item ID:
 Required Date: 4/29/2016 Req'd Qty: 28.00 ***28*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110	Receive & Inspect for Damage & Mat'l Certs	0.00							
110									
Packaging	Memo	0.00							
Packaging	Ensure material certification is attached								
120	QC- Inspect dimensions to drawing	0.00							
120									
QC	Memo	0.00							
Quality Control	Ensure Material certification comply to Dwg								
150	Identify as per dwg & Stock Location: LG003	0.00							
150									
Packaging	Memo	0.00							
Packaging	LOCATION : LG003								

30 x SP16-04-28

DAS
16
9-80

2016/04/29
P10 -7

30 0
mark
16/04/29

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☒

Work Order: <u>139426</u> Part No. <u>D601Y-090</u> NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : <u>2006/04/28</u>		Step #: <u>120</u>		QTY Effective : _____			MRB (QSI042) Approval DAS 16 9-89 <u>2006/04/28</u>		
Description Work Order Deviation <u>change step #120 to QC18 inspection</u>				Disposition 				Completed By <u>16.05.03</u> Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval DAS 16 9-89 <u>2006/04/28</u>	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabelled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER : ☐									

Work Order ID 139426

Friday, November 27, 2015 3:22:46 PM

139426

Page 3

Item ID: D6014-090

Accept

N900040100Setup Start ***NS1***

Revision ID:

Item Name: ALUMINUM EXTRUSION

Stop ***NS2***

Start Date: 11/27/2015 Start Qty: 28.00

28

Cust Item ID:

Required Date: 4/29/2016 Req'd Qty: 28.00

28

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

160

QC21- Final Inspection - Work Order Release

0.00

160

QC

Memo

0.00

Quality Control

MCJ

MAY 03 2016

Jem 16/05/02

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval				
Description Work Order Deviation				Disposition							
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐		☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ OTHER :		☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes		☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center		☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence	

Picklist Print

Friday, November 27, 2015 3:22:51 PM

Page 1

Work Order ID: 139426

139426

Parent Item: D6014-090

D6014-090

Parent Item Name: ALUMINUM EXTRUSION

Start Date: 11/27/2015

Required Date: 4/29/2016

Start Qty: 28.00

Required Qty: 28.00

Comments: IPP A05.08.31New issueKJ/JLM
remove handfinishing and qc3

IPP Rev:B 10.06.07

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6014-090P		Purchased			No	110	Each	0.0000	1	28			
D6014-090P									**				
Aluminum Extrusion													

30x
8/16-04-28

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

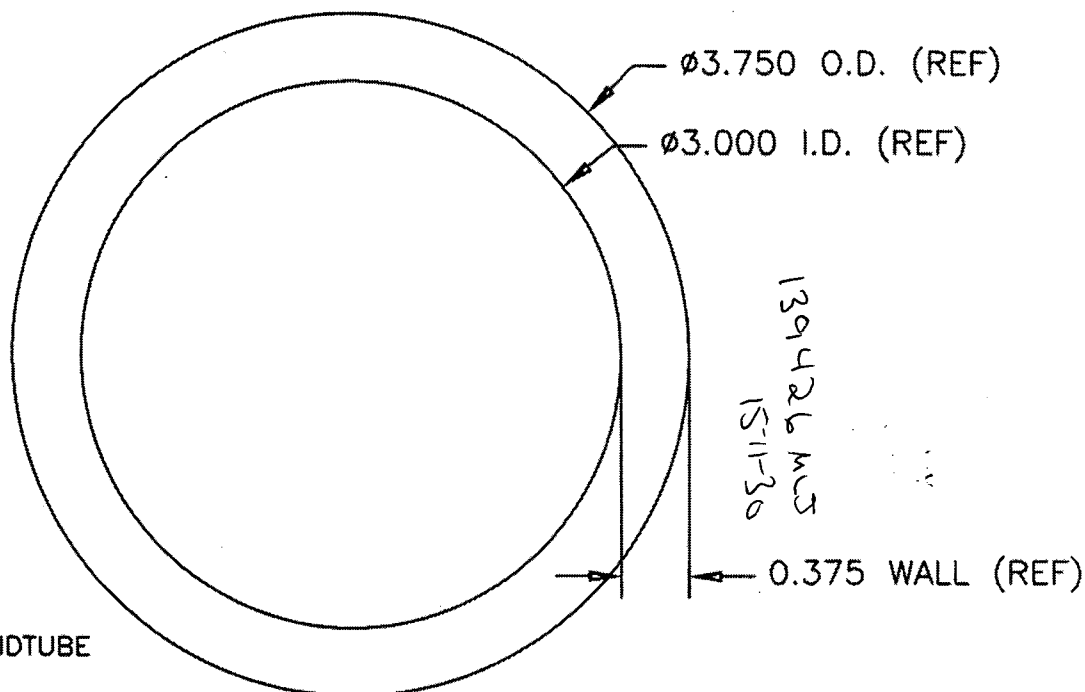
Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					



DESIGN PH	DRAWN BY PH	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D6014	REV. A SHEET 1 OF 1
DATE 05.03.18		TITLE SKIDTUBE MATERIAL	SCALE 1:1
A	05.03.18	NEW ISSUE	

RELEASED
05-08-09 *[Signature]*

SPECIFICATION CONTROL DRAWING



NOTES

- 1) D6014-XXX SKIDTUBE
LENGTH

WHERE XXX IS LENGTH IN INCHES
EG. 64" LONG TUBE: D6014-064

- 2) MATERIAL: 3.750 OD x 0.375 WALL 7075-T73/T73510/T73511 PER QQ-A-200/11
SEAMLESS ALUMINUM TUBE.
MINIMUM ULTIMATE TENSILE STRENGTH = 68 ksi
MINIMUM YIELD TENSILE STRENGTH = 57 ksi
- 3) TOLERANCES ARE PER ASTM B210 AS FOLLOWS:
O.D.: ± 0.008 MEAN (± 0.016 INCLUDING OVALITY)
WALL: ± 0.015 MEAN (± 0.038 INCLUDING ECCENTRICITY)
LENGTH: XXX $+0.188/-0.000$
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH
- 4) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 5) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

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Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO30644**

Purchase Order Date 12/3/2015

PO Print Date 1/6/2016

Page Number 3 of 6

Order From :

VU-ALU001

ALUMINIUMWERK UNNA AG
630 3033 SOUTH PARKER RD
AURORA, CO 80014
USA

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

303 755 5672

Ship To Contact

Ship To Phone

Ship Via:

Contract Shipping

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Wire

Currency

USD

FOB

DDP - (Delivered Duty Paid)

Line Total:

\$12,720.00

7

D6014-090P

Aluminum Extrusion

5/2/2016

Yes

5/2/2016

28.00

Each

\$524.00

\$14,672.00

EXTRUDE AS PER DWG D6014-090 REV. A
B139426

See Box

Line Total:

\$14,672.00

8

D6023-106P

Crosstube Material

5/2/2016

Yes

5/2/2016

23.00

Each

\$749.00

\$17,227.00

EXTRUDE AS PER DWG D6023-106 REV. A
B139411

*See Box
8016 at 28*

Line Total:

\$17,227.00

9

D6024-103P

Crosstube Material

5/2/2016

Yes

5/2/2016

44.00

Each

\$374.00

\$16,456.00

EXTRUDE AS PER DWG D6024-103 REV. A
B139410

PO Instructions: QUOTE DEL. 2016-2017 (002)

Note:

1/6/2016



consignee : DART AEROSPACE LTD.
HAWKESBURY

client: 40980

confirmation # : 59326/700

purchase order : P030644

AWU article : 37351 / 3,750 x 375 x 90,000 - ,000 I

client article : D6014-090 3.750 X 0.375 X 90

alloy : EN AW-7075 Int. Alloy No. : 7075

quantity : 14 gross : 340,000 Kg

length : 2.286,00 MM net : 237,000 Kg

package id : 128106 piece : 2 case no. : 2

pcs. / length / cast no. / heat no

14x2286,00/4484 - 1305253

information :

supplier : Aluminiumwerk Unna AG

contact : fon +49(0)2303-206- 0

date : 14.03.2016

Uelzener Weg 36 - D-59425

fax +49(0)2303-206-116

30X



consignee : **DART AEROSPACE LTD.**
HAWKESBURY

client: 40980

confirmation # : **59326/700**

purchase order : PO30644

AWU article : 37351 / ~~3.750~~ x ,375 x 90,000 - ,000 I

client article : D6014-090 3.750 X 0.375 X 90

alloy : EN AW-7075 Int. Alloy No. : 7075

quantity : 16 gross : 376,500 Kg

length : 2.286,00 MM net : 271,000 Kg

package id : 128104 piece : 2 case no. : 1

pcs. / length / cast no. / heat no

16x2286,00/4484 - 1305253

information :

supplier : Aluminiumwerk Unna AG

Uelzener Weg 36 - D-59425

contact : fon +49(0)2303-206- 0

fax +49(0)2303-206-116

date : 14.03.2016

Packinglist ALUnna AG

ALUnna ref. no.	59326/700
Customer PO.	PO. 30644
Date:	03.30.16

Boxmarking:

Dart Aerospace PO. 30644	D6014-090
Made in Germany	
Dest. Hawkesbury Ont., Canada	

We hereby declare that the wooden packing material are totally free from bark and apparently

free from live plant pests

[illegible]

8/2/16 - 01-28

order confirmation

59326

page: 4
date: 1.06.2016
customer: 40980

RMS max.: outer 25 / tol. on quantity +10 % -10 % / scurfed
2.250" OD 0.320" Wall, 115" lengths
Part Number D6010-115 crosstube
Surface Finish max. RMS 25
Tolerances per ASTM B210 / your drawing D6010
Tubes protected with corrosion protective oil
Tubes line marked

Packing: seaworthy wooden cases

item	quantity	unitprice	USD	unit value	USD	delivery
600	20,000	PC	636,00	PC	12.720,00	August 30, 2016

AWU article: 37273 / Tariff no. 76082081
Customer article: D6011-115 2.750 X 0.650 X 115 / cust. drwg.
product: Tubes / seamless extruded / EN AW-7075 / round
condition: T 6511 / AMS-QQ-A-200/11(A)

outer diameter:	2,750 INCH Tol.	+0,030	-0,030
tol. for mean OD		+0,015	-0,015
inner diameter:	1,450 INCH		
wall thickness:	0,650 INCH Tol.	+0,065	-0,065
fixed length	115,000 INCH Tol.	+0,125	

test report acc. to EN 10204/3.1 / RM 531 / Rp0,2: 455
straightness 0,01 INCH / 1 FEET / RMS max.: outer 25
tol. on quantity +10 % -10 % / scurfed
2.750" OD 0.650" Wall, 115" lengths
Part Number D6011-115 crosstube
Surface Finish max. RMS 25
Tolerances per ASTM B210
Tubes protected with corrosion protective oil
Tubes line marked

Packing: seaworthy wooden cases

item	quantity	unitprice	USD	unit value	USD	delivery
700	28,000	PC	524,00	PC	14.672,00	May 02, 2016

AWU article: 37351 / Tariff no. 76082081
Customer article: D6014-090 3.750 X 0.375 X 90 / cust. drwg.
product: Tubes / seamless extruded / EN AW-7075 / round
condition: T 73511 / AMS-QQ-A-200/11(A)

outer diameter:	3,750 INCH Tol.	+0,016	-0,016
tol. for mean OD		+0,008	-0,008
inner diameter:	3,000 INCH		
wall thickness:	0,375 INCH Tol.	+0,037	-0,037
fixed length	90,000 INCH Tol.	+0,188	

Handelskammer Hamburg

(Hamburgische Handelskammer)

Handelskammer Hamburg - Handels- und Wirtschaftsbedingungen -

7. Sonstige Bestimmungen

8. Sonstige Bestimmungen

11. Zahlungsbedingungen

9. Kreditkonditionen

12. Schlussbestimmungen

10. Eigentumsvorbehalt

Abnahmeprüfzeugnis 3.1 - DIN EN 10204:2005

Inspection Certificate 3.1 - DIN EN 10204:2005 / Certificat de Reception 3.1- DIN EN 10204:2005

Kunde: Dart Aerospace Ltd.
Client:

1270 Aberdeen Street
K6A1K7 Hawkesbury, ON Canada

Zeugnisnummer: 305/16

Cert No.: / No. du certificat:

Bestellnummer: PO30644

Order No. / No. de commande

Auftrag: 59326/700

Our Reference/Notre Reference:

Produkt: Rohre nahtlos gepresst

Product / Produit: Tubes seamless extruded

Spezifikation: AMS - QQ - A - 200/11A; Spezifikation Dart Aerospace D6014

Specification:

Werkstoff: 7075

Alloy/Alliage:

Zustand: T 73511

Temper/État:

DAS

16

9-89

206/09/29

Abmessung 3,750 INCH x 3,000 INCH x 0,375 INCH x 90,000 INCH

Size / Dimension D6014-090

Kennzeichnung ALUnna - Cert. No. 305/16 - 7075 - T 73511 - Cast No. 4484 - AMS - QQ-A- 200/11 A - 3.750" OD X 0.375" Wall - Heat Lot No.

Marking/Marquage: 1305253 - ALUnna Order Conf. No. 59326/700-1-P.O. 30644

Lieferung

Delivered Material / Matériel délivré:

pcs.

30

lbs

1120

Country of Manufacture: Germany

Products are in accordance with applicable RoHS

1. Chemische Analyse

Chemical Analysis / analyse chimique

Charge/ min. Cast No. max.	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Zr	Bi	Sn	Ni	Na
	0,40	0,50	1,2 2,0	0,30	2,1 2,9	0,18 0,28	5,1 6,1	0,20						
4484/15	0,204	0,202	1,447	0,103	2,483	0,194	5,723	0,038	0,004	0,0169	0,0001	0,0016	0,0060	0,0002

Hydrogen content: 0,15

ccm/100 g Al Elements without indication < 0,01 %

country of melt manufacturer: Germany

2. Mechanische Eigenschaften

Mechanical Properties / Valeurs Mécaniques

Anforderungen Requirements	tensile (Rm) ksi	yield (Rp0,2) ksi	elongation 2" %	elongation A %	Hardness HB	RMS 25 / Ra max. 0,58 µm'
	68,0	57,0	8,0			
1	75,980 ✓	66,555	11,0			11,9 µm
2	75,980 ✓	66,845 ✓	11,0			

**Ergebnis der
Prüfungen:**

Es wird bestätigt, daß die Lieferung geprüft wurde und den Vereinbarungen bei der Bestellannahme entspricht

Test results:

We confirm that the delivery has been tested and applies to the agreements made on receipt of the order

Resultats:

Nous confirmons que la livraison a été contrôlée et correspond avec les conventions faites à la réception de la commande

mergardtri

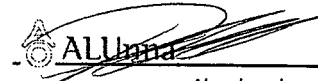


Certified acc. DIN EN ISO 9001:2008 and DIN EN 9100:2009
valid until 2016-11-10

Cert.- Req. No.: 001959 QM08; 001959 ASH 09-1

15.03.2016

Aluminiumwerk Unna AG, Uelzener Weg 36, 59425 Unna, Germany



Abnahmebeauftragter

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: D6014-090
 DATE: 2016/04/28

PO / BATCH NO.: P030644 / B139426

MATERIAL CERT REC'D: YES
 QUANTITY RECEIVED: 30 PCS
 QUANTITY INSPECTED: 12 PCS
 QUANTITY REJECTED: _____

THICKNESS ORDERED: See Attached Extrusion Report
 THICKNESS RECEIVED: _____
 SHEET SIZE ORDERED: N/A
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	☒	
CORRECT FINISH	☒	N	
CORROSION	Y	☒	
CORRECT GRAIN DIRECTION	☒	N	
CORRECT MATERIAL	☒	N	7075 T6
CORRECT THICKNESS	☒	N	See Attached Extrusion Report
PHOTO REQUIRED	Y	☒	
CORRECT MATERIAL	☒	N	AMS - 2026 - A - 200
CORRECT REF # TO LINK CERT	☒	N	P030644
CORRECT MATERIAL IDENTIFICATION	Y	N	N/A
CORRECT M# ON THE MATERIAL	Y	N	N/A
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	☒	
DOES THIS REQUIRE AN EXTRUSION REPORT	☒	☒	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	N/A

testers located in the Quality Office

QC 13 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: <u>S</u>	SIGNED OFF BY: _____		
DATE: <u>16/04/29</u>	DATE: _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

MATERIAL RECEIPT INSPECTION FORM

INSTRUCTIONS FOR INSPECTING BAR, TUBING, ROUND, & SHEET STOCK

- 1- VERIFY STOCK TO DART PURCHASE ORDER
- 2- MEASURE ALL DIMENSIONS FOR EACH PURCHASED STOCK
 - a. WIDTH, THICKNESS, DIAMETER, WALL THICKNESS & LENGTH
- 3- VERIFY CONDITION OF MATERIAL i.e. DAMAGED, CORRODED, etc.
- 4- VERIFY THAT SUPPLIER HAS A NUMBER (HEAT #) ON ITS RECEIVING REPORT TO LINK TO MATERIAL CERTS
- 5- VERIFY MATERIAL CERTS ARE CORRECT TO THE DART PO INSTRUCTIONS
- 6- REMOVE / CUT A PIECE OF MATERIAL FOR SAMPLE HARDNESS TESTING

INSTRUCTIONS FOR INSPECTING SKIDTUBE & STEP EXTRUSION

- 1- VERIFY TO DART SUPPLIED DRAWING
- 2- SAMPLE INSPECT MATERIAL IN BUNDLE TO ENSURE MATERIAL CAN BE RECEIVED INTO DART
- 3- USING PORTABLE HARDNESS TESTER VERIFY HARDNESS OF THE MATERIAL TO THE DRAWING
- 4- VERIFY THAT MATERIAL CERTS MATCH TO WHATS CALLED UP ON THE DART DRAWING

AFTER MATERIAL PASSES INSPECTION

- 5- HAVE DART EMPLOYEES START STOCKING MATERIAL BUT REQUEST MIN **20pcs** FOR FULL INSPECTION
- 6- INSPECT ALL DIMS AS PER DRAWING REQUIREMENTS

INSTRUCTIONS FOR INSPECTING CROSS TUBE MATERIAL

- 1- VERIFY MATERIAL CERTS MATCH THE REQUIREMENTS ON THE DART DRAWINGS
- 2- INSPECT MIN. HALF THE BATCH OF EXTRUSION RECEIVED INTO DART
- 3- INSPECT MATERIAL AS PER THE EXTRUSION REPORT
 - a. WALL THICKNESS USING ULTRA-SONIC IN 4 LOCATIONS
 - b. OUTSIDE DIAMETER HIGHEST/LOWEST BOTH ENDS
 - c. INSIDE DIAMETER HIGHEST/LOWEST BOTH ENDS
 - d. STRAIGHTNESS @ CENTER OVER 12" SPAN
 - e. WALL THICKNESS USING TUBE MICROMETER HIGHEST/LOWEST BOTH ENDS
- 4- IDENTIFY EACH TUBE IN SEQUENCE OF INSPECTING (TUBE 1, TUBE2.....) AND W/O# AND PO#
- 5- RECORD ALL FINDINGS ON EXTRUSION REPORT

IF ANY QUESTIONS PLEASE SEE QC COORDINATOR BEFORE GOING FURTHER